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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,038	10/22/2003	Shiraz Ali Qureshi	100203780-1	6439

22879 7590 11/09/2006

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EXAMINER

REHMAN, MOHAMMED H

ART UNIT PAPER NUMBER

2112

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,038

Applicant(s)

QURESHI ET AL.

Examiner

Mohammed H. Rehman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Objection

1. **Claim 1** has a statement "system firmware and **ACPI** subsystem". The applicant should write the abbreviated term like **Advanced Configuration and Power Interface (ACPI)**. Proper correction should be made.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 10** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter since the claim invention fail to fall within any of the categories of patentable subject matter set forth in § 101.

Claim 10 recites, "**a machine-readable medium...**".

The applicant has not defined the machine readable medium in his specification. However, Computer-readable media has been redefined in paragraph [0074] to incorporate non-statutory signal elements (e.g. "transmission media includes coaxial cables, copper wire, and fiber optics, including the wires...", "acoustic or light waves, such as those generated during radio-wave and infra-red data communications...", "...any other optical medium...", "...a carrier wave as described hereinafter, or any other medium from which a computer can read..."). Moreover, it does **not appear** that the claims reciting "**a machine-readable medium**" with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

In view of the above analysis, it is clear that claim 10 recited machine-readable medium claim is ineligible for patent protection because it does not fall within statutory classes of § 101. The examiner suggests Applicant to specify in the claim a tangible item, such as a " **machine-readable storage medium** ". Appropriate corrections are therefore required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. ("Jain") U.S. Patent No. 5,615,167 in view of Raatikainen et al. ("Raatikainen") U.S. Patent No. 5,886,992.

Regarding Claims 1,12 and 13, Jain teaches a method of semaphoring [Jain, col-1(54)] between a system firmware and ACPI subsystem, the method comprising:

If the second entity has the turn, then checking an In flag [Jain, col-1(59, lock flag)] of the second entity to determine if the second entity is in the critical section [Jain, col-1(53-62)]; if the second entity is in the critical section, then waiting for the second entity to exit the critical section; and entering the critical section by the first entity [Jain, col-4(41-60)]. Jain does not expressly teach wherein a "turn flag" is being used by the first or second entity in order to have the access to the intended resource.

In the same field of endeavor (e.g. frame synchronized system and method for data communications in a ring communication network), Raatikainen teaches a turn flag is used in semaphore operation before accessing a resource [Raatikainen, col-12(23-26) and col-19(10-15)] At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a turn flag to give access to a resource in semaphore operation for keeping order of the access requests.

The motivation for doing so would have been to remove processing bottleneck in high speed (1GB/sec) Media Access Control (MAC) protocol to support ring communication network [Raatikainen, col-8(12-13)].

Regarding Claim 2, Raatikainen teaches the method of claim 1, further comprising:

setting an In flag of the first entity to "TRUE" prior to entering the critical section [Raatikainen, col-18(62-65)].

The motivation that was utilized in the combination of Claim 1, super, applies equally as well to Claim 2.

Regarding Claim 3, Raatikainen teaches the method of claim 1, further comprising:

setting an In flag of the first entity to "FALSE" after exiting the critical section [Raatikainen, col-19(16-20)].

The motivation that was utilized in the combination of Claim 1, super, applies equally as well to Claim 3.

Regarding Claim 4, since it is directly related to Claim 1 (according to the Examiner's interpretation), the supporting rationale of the rejection to Claim 1 applies equally as well to Claim 4.

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Regarding Claim 7, Jain teaches the method of claim 1, wherein the first entity checks a shared memory [Jain, col-4(66)] to determine priority [Jain, col-4(61-67) and col-5(1-6)] in the critical section.

4. **Claims 5**, and **6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain in view of Raatikainen as applied to claim 1 above (hereinafter “Jain-Raatikainen”), and further in view of Wunderlich et al. (“Wunderlich”) U.S. Patent No. 6,584,573.

Regarding Claim 6, Jain-Raatikainen teaches all the limitations of claim 6 as described in rejecting claim 1 above. Jain-Raatikainen does not disclose expressly wherein the first entity is the ACPI subsystem and the second entity is the system firmware in a semaphore process.

In the same field of endeavor Wunderlich discloses said first entity is the ACPI [Wunderlich, col-5(21)] subsystem and the second entity is the system firmware [Wunderlich, col-5(22)] in a semaphore process.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use first entity as the ACPI subsystem and the second entity as the system firmware in a semaphore operation.

The motivation for doing so would have been to take action to enter and/or exit the CPU sleep state [Wunderlich, col-5(30-31)].

Regarding Claim 5, since it is directly related to Claim 6 (according to the Examiner’s interpretation), the supporting rationale of the rejection to Claim 6 applies equally as well to Claim 5.

Regarding Claims 8-11, Claims 8-11 are directed to a apparatus of the method of Claims 1-7. Jain, Raatikainen and Wunderlich teach, either alone or in combination, the method of Claims

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1-7, as described above. Therefore, Jain, Raatikainen and Wunderlich also teach the apparatus of Claims 8-11.

The prior art made of record and not relied upon is considered pertinent to applicants disclosure includes: The following prior arts are from same field of transaction request servicing mechanism.

U.S. Patent(s):

US 6131131 A

Robert Bassman et al.

US 6795850 B2

Chia Y. Wu et al.

US 6912621 B2

Kenneth M Harris et al.

U.S. Patent Publication(s):

US 20030065853 A1

Richard A. Lary et al.

US 20030041273 A1

Jing-Rung Wang et al.

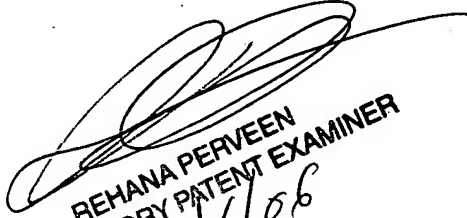
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed H. Rehman whose telephone number is 571-272-1412. The examiner can normally be reached on 9.00-5.00 (Mon - Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR


REHANA PERVEEN
SUPERVISORY PATENT EXAMINER
11/6/06